

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
1 CONGRESS STREET - SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023**

FACT SHEET

**DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES**

NPDES PERMIT NO: **MA0026247**

PUBLIC NOTICE DATE:

NAME AND ADDRESS OF APPLICANT:

**New England Detroit Diesel – Allison, Incorporated
90 Bay State Road
Wakefield, Massachusetts 01880**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**New England Detroit Diesel – Allison, Incorporated
90 Bay State Road
Wakefield, Massachusetts 01880**

RECEIVING WATER: **a surface drainage channel to the Saugus River**

CLASSIFICATION: **B** (Warm Water)

I. PROPOSED ACTION

The above named applicant has applied to the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (MassDEP) for the re-issuance of a National Pollutant Discharge Elimination System (NPDES) permit to discharge storm water and process water into the designated receiving water. The permit, which was issued to New England Detroit Diesel – Allison, Inc. (NEDDA) on March 7, 1986 (the current permit), became effective on April 7, 1986, and expired on April 7, 1991. EPA received a permit renewal application dated December 27, 1990 from NEDDA. Since the permit renewal application was deemed complete by EPA, the permit has been administratively continued.

II. TYPE OF FACILITY

NEDDA is a facility that rebuilds engines and transmissions. The discharges subject to NPDES requirements consists of one outfall, Outfall 001. From Outfall 001, there are three discharges

consisting of storm water (001A), discharge from an engine dynamometer (001B), and discharge from a chassis dynamometer (001C).

The maximum flow through either dynamometer is 60 gpm. The maximum testing time for the engine dynamometer is 4 hours; therefore, the maximum flow from the engine dynamometer is 14,400 gallons/test. The maximum testing time for the chassis dynamometer is one hour; therefore, the maximum flow from the chassis dynamometer is 3600 gallons/test. The storm water and dynamometer process water discharge from Outfall 001 to the Saugus River via a one-mile long surface drainage channel. A site map is provided in Attachment A to this fact sheet.

III. SUMMARY OF MONITORING DATA

A quantitative description of the discharges in terms of significant effluent parameters based on past Data Monitoring Reports (DMRs) was reviewed and used in the development of the draft National Pollutant Discharge Elimination System (NPDES) permit (draft permit). A summary of this data is provided in Attachment B to this fact sheet.

NEDDA samples the combined discharges from the facility in a manhole at the edge of their property before discharge under Bay State Road to a surface drainage channel. This channel stretches approximately 1-mile before ultimately joining the Saugus River. Samples taken at this location are representative of the cumulative effect of all three discharges. The draft permit will require separate monitoring of each waste stream.

IV. PERMIT BASIS AND EXPLANATION OF EFFLUENT LIMITATION DERIVATION

The effluent limitations, monitoring requirements, and any implementation schedule, if required, may be found in Part 1 (Effluent Limitations and Monitoring Requirements) of the draft permit. The permit application is part of the administrative file (Permit No. MA0026247).

A. General Requirements

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a NPDES permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement technology and water quality-based effluent limitations and other requirements including monitoring and reporting. The draft permit was developed in accordance with various statutory and regulatory requirements established pursuant to the CWA and applicable State regulations. During development, EPA considered the most recent technology-based treatment requirements, water quality-based requirements, and all limitations and requirements in the current/existing permit. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136. The general conditions of the draft permit are based on 40 CFR §122.41 and consist primarily of management requirements common to all permits. The effluent monitoring requirements have been established to yield data representative of the discharge under authority of Section 308(a) of the CWA in accordance with 40 CFR §122.41(j), §122.44(i), and §122.48.

1. Technology-Based Requirements

Subpart A of 40 CFR §125 establishes criteria and standards for the imposition of technology-based treatment requirements in permits under Section 301(b) of the CWA, including the application of EPA promulgated effluent limitations and case-by-case determinations of effluent limitations under Section 402(a)(1) of the CWA.

Technology-based treatment requirements represent the minimum level of control that must be imposed under Sections 301(b) and 402 of the CWA (see 40 CFR §125 Subpart A) to meet best practicable control technology currently available (BPT) for conventional pollutants and some metals, best conventional control technology (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants. In general, technology-based effluent guidelines for non-POTW facilities must be complied with as expeditiously as practicable but in no case later than three years after the date such limitations are established and in no case later than March 31, 1989 [See 40 CFR §125.3(a)(2)]. Compliance schedules and deadlines not in accordance with the statutory provisions of the CWA cannot be authorized by a NPDES permit. EPA has not promulgated technology-based National Effluent Guidelines specifically for waste water from automotive repair services (Standard Industrial Code 75).

2. Water Quality-Based Requirements

Water quality-based criteria are required in NPDES permits when EPA and the State determine that effluent limits more stringent than technology-based limits are necessary to maintain or achieve state or federal water-quality standards (See Section 301(b) (1)(C) of the CWA). Water quality-based criteria consist of three (3) parts: 1) beneficial designated uses for a water body or a segment of a water body; 2) numeric and/or narrative water quality criteria sufficient to protect the assigned designated use(s) of the water body; and 3) anti-degradation requirements to ensure that once a use is attained it will not be degraded. The Massachusetts State Water Quality Standards, found at 314 CMR 4.00, include these elements. The State Water Quality Regulations limit or prohibit discharges of pollutants to surface waters and thereby assure that the surface water quality standards of the receiving water are protected, maintained, and/or attained. These standards also include requirements for the regulation and control of toxic constituents and require that EPA criteria, established pursuant to Section 304(a) of the CWA, be used unless site-specific criteria are established. EPA regulations pertaining to permit limits based upon water quality standards and state requirements are contained in 40 CFR §122.44(d).

Section 101(a)(3) of the CWA specifically prohibits the discharge of toxic pollutants in toxic amounts. The Commonwealth of Massachusetts (State) has a similar narrative criteria in their water quality regulations that prohibits such discharges [See Massachusetts Title 314 CMR 4.05(5)(e)]. The effluent limits established in the draft permit assure that the surface water quality standards of the receiving water are protected, maintained, and/or attained.

Water quality based limitations are established with the use of a calculated available dilution. Title 314 CMR 4.03(3)(a) requires that effluent dilution be calculated based on the receiving water 7Q10. The 7Q10 is the lowest observed mean river flow for 7 consecutive days, recorded over a 10 year recurrence interval. Additionally, the plant design flow is used to calculate available effluent dilution as required by 40 CFR §122.45(b). As the surface drainage channel

that NEDDA discharges to is small in comparison to the discharge from the facility during dynamometer operation, the appropriate dilution factor is 1.

3. Anti-Backsliding

EPA's anti-backsliding provision as identified in Section 402(o) of the Clean Water Act and at 40 CFR §122.44(l) prohibits the relaxation of permit limits, standards, and conditions unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued. Anti-backsliding provisions apply to effluent limits based on technology, water quality, BPJ and State Certification requirements. Relief from anti-backsliding provisions can only be granted under one of the defined exceptions [See 40 CFR §122.44(l)(i)].

4. Anti-Degradation

The Massachusetts Anti-Degradation Policy is found at Title 314 CMR 4.04. All existing uses of the Saugus River must be protected. The Saugus River is classified as a Class B water body by the State of Massachusetts and as such, is designated as habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation. Where designated, Class B water bodies shall be suitable as a source of public water supply with appropriate treatment. They shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and process uses. These waters shall have consistently good aesthetic value. According to MassDEP, the discharge location is outside the Area of Critical Environmental Concern (ACEC) of the Saugus River, which is primarily salt water. The effluent limits established in the draft permit will protect the existing uses of the Saugus River.

B. Description of the Facility

NEDDA is located at 90 Bay State Road in Wakefield, Massachusetts. The facility consists of one large building surrounded by a parking lot. Eight (8) interconnected catch basins are dispersed throughout the parking lot. Refer to Attachment C for a map of the discharge location and catch basins.

The discharge from the facility consists of storm water from the surrounding parking lot, discharge from two dynamometers, and flow from an adjacent un-named wetland. The wetland is on the property of Camp Curtis Guild – National Guard Reservation and is bordered by Bay State Road and the facility. An industrial building and parking lot are located near the facility at 81 Bay State Road, on the opposite side of Bay State Road across from the wetland. Interstate 95 runs parallel to Bay State Road in the vicinity of the facility. Refer to Attachment D to this fact sheet for a map of the facility location (Google Earth, 2006).

A dynamometer is an instrument that simulates loads on engines and chassis by creating a competing load through use of pressurized water to turn veins, similar to the way a turbine functions. There are two dynamometers onsite that serve to simulate various driving conditions and engine loads in order to diagnose vehicle problems. Both dynamometers operate the same way and both are rated at 1,000 horsepower (HP). One dynamometer is designated the chassis dynamometer and one is the engine dynamometer. The amount of HP that the dynamometer is

run at varies depending upon the size of the engine or vehicle tested and the test performed. However, the engine dynamometer is consistently run at a higher HP rating than the chassis dynamometer. Thus, the water discharge from the engine dynamometer is expected to be at a higher temperature.

There has been a significant reduction in the use of the dynamometer since issuance of the current permit due to technological advances in testing. At the time of current permit issuance, the engine dynamometer was used daily. Now, tests run using the engine dynamometer occur about once per quarter and last approximately 2-4 hours. Tests run with the chassis dynamometer occur about twice per month and last approximately 30 minutes to 1 hour.

Water is used to move the stainless steel veins (similar to blades) within the enclosed chamber of the dynamometer. The engine dynamometer is bolted to the engine with a shaft. Water does not come in contact with any parts within the engine. The water turns the two sets of veins, which then turns the shaft which simulates a load on the engine. The chassis dynamometer is located below floor level in a compartment. The water turns the two sets of veins, which then turns two large circular rollers which simulate a load on the wheels of the vehicle being tested.

The water becomes heated as a result of friction from the veins within the dynamometer. It is expected that the water within the dynamometer is at its highest temperature about $\frac{1}{2}$ to $\frac{3}{4}$ of the way through any test. The dynamometer is sealed by a double-lipped, ceramic, lubricated seal in a manner that, in case of seal leakage, water would leak externally along with any lubricant from the seal, rather than internally to the enclosed water chamber of the dynamometer.

The water from the dynamometers discharges through a one-inch pipe to a catch basin in the parking lot adjacent to the building. This catch basin then flows to another catch basin which also collects flow from the wetland adjacent to the facility. This water then flows to a manhole where the sampling point (001) is located, prior to discharge under Bay State Road to a surface drainage channel which runs one mile, under Route 95, to the Saugus River. City water is used as a source for the dynamometers. No additives are used in the water for the dynamometer.

C. Description of Discharge

Discharges from NEDDA consist of storm water runoff and discharge from both dynamometers. Refer to Attachment C to this fact sheet for the location of each catch basin and Outfall 001. Outfall 001 is the manhole that all of the catch basins flow to before discharge to the surface drainage channel to the south of the facility. The sources of storm water are surface run-off from the parking lot and run-off from the roof of the building.

The samples reported in the DMRs were taken during storm events, thus increasing the possibility of storm water dilution of the water discharge from the dynamometer (if a dynamometer was in operation during the sampling event).

The catch basins are all “inverts,” in that they are designed in a way to discharge from below the surface of the water in the catch basin, and leave a residual amount of water within the catch basin. The catch basins are 4-5 feet deep and about 3.5 feet in diameter. They hold from 400-600 gallons of water at all times. A “sock” at the top of each catch basin serves to remove any

oil from the water discharges (either storm water or water from the dynamometer) by absorption. Refer to Attachment E for a diagram of an “invert” catch basin (labeled as an MDC separator in the diagram).

The water from the dynamometers discharges through a one-inch pipe to a catch basin in the parking lot adjacent to the building and combine with any storm water discharge. The combined waste streams flow through the series of catch basins and additionally combine with any flow from the un-named wetland. The water is sampled at a manhole before discharge to the surface drainage channel. The water is then conveyed under Bay State Road to a channel which runs under Interstate Route 95 and after about 1-mile, to the Saugus River.

Other water flows from the facility consist of all of the floor drains within the building which include discharges from any spills and any washing of parts. This water flows to three (3) “invert” catch basins that function in series to remove any oil and then to storage tanks located inside the building. These storage tanks periodically pump water to an evaporator which uses a heat exchanger to heat the water and increase the rate of water evaporation. The residual from the evaporator is taken offsite and disposed. In this manner, the facility treats approximately 500 gallons/day of water collected from the floor drains. No surface water discharges result from the operation of this system.

Additionally, several street catch basins are located nearby along Bay State Road. However, the sampling point is located before the possible combination of flow from the street catch basins and the facility discharge.

1. Outfall 001A

Outfall 001A consists of storm water runoff from the parking lot and the roof of the building. Storm water from the facility flows from the parking lot and the roof of the building to the catch basins. No vehicle and equipment maintenance is performed in the parking lot, however, parts awaiting pick-up are sometimes stored outside in the parking lot and were observed on a site visit conducted by EPA (Trip Report, June 22, 2006). The previous DMR data suggests that the storm water discharge was sampled the most frequently, as the permit required sampling to be taken within 20 minutes of the beginning of a rain storm and not necessarily during the operation of the dynamometers.

2. Outfall 001B

Outfall 001B consists of discharge from the engine dynamometer. The previous sampling could contain some data from the discharge from the engine dynamometer, but the results would be diluted with storm water as the current permit required sampling within 20 minutes of the beginning of a rain storm.

3. Outfall 001C

Outfall 001C consists of discharge from the chassis dynamometer. The previous sampling could contain some data from the discharge from the chassis dynamometer, but the results would be

diluted with storm water as the current permit required sampling within 20 minutes of the beginning of a rain storm.

D. Discharge Location

The storm water and the water from the dynamometers all discharge through a series of catch basins, combine with flow from the adjacent un-named wetland, and discharge from a manhole to a surface drainage channel. The channel runs under Bay State Road and Interstate 95 and ultimately discharges to the Saugus River, about a mile from the facility.

E. Proposed Permit Effluent Limitations and Conditions

The draft permit for NEDDA, authorizing the discharge of storm water and dynamometer process water, includes effluent limits and requires the development, implementation, and annual review of the BMPP prepared for the facility. The effluent parameters in the draft permit are discussed in more detail below according to the effluent characteristic(s) being regulated.

All samples shall be tested using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. The concentration of the minimum level (ML) must be lower than the permit limits, where the ML is the lowest point on the curve used to calibrate the analytical equipment for the pollutant of concern.

1. Outfall 001A

a. Flow

The flow through Outfall 001A consists of storm water run-off from the parking lot and the building roof. The draft permit requires NEDDA to report the flow rate of the storm water. Flow is required to be monitored by estimation of the volume of water discharged from the manhole that discharges to the channel during a storm event. The average monthly and maximum daily flow values shall be reported on DMRs bi-annually. This is a reduction from the quarterly monitoring frequency of the current permit. However, the flow limit in the current permit was in place to limit the flow from the dynamometers. Therefore, a numerical limit is applied in the draft permit for the flows from the dynamometers, not for the storm water flow. Furthermore, the BMPP requirement established in the draft permit will serve to regulate storm water management to a much greater extent than frequent monitoring.

b. Temperature

The maximum daily effluent limit for temperature based on Massachusetts Water Quality Standards for a Class B inland water body is applied in the draft permit to those flows with reasonable potential to exceed ambient temperatures, the flows from the dynamometers. Therefore, the draft permit does not include temperature limits for storm water discharge through Outfall 001A.

c. Oil and Grease (O&G)

The maximum daily effluent limit for oil and grease in the current permit of 15 mg/L is based on Massachusetts Water Quality Standards for a Class B inland water body. According to 314 CMR 4.05(3)(b)(7), these waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portion of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life. A concentration of oil and grease of 15 mg/L is recognized as the level at which many oils produce a visible sheen and/or cause an undesirable taste in fish (USEPA. 1976). Previous sampling at the facility reported an average O&G level of 5 mg/L and one exceedence with an O&G level of 77 mg/L on September 15, 1988.

The draft permit maintains a maximum daily O&G limit of 15 mg/L, reported bi-annually, based on Massachusetts Water Quality Standards and anti-backsliding requirements found in 40 CFR §122.44(l). This is a reduction from the quarterly monitoring frequency of the current permit. The BMPP requirement established in the draft permit will serve to regulate storm water management to a much greater extent than frequent monitoring.

d. Total Suspended Solids (TSS)

Heavy metals and polynuclear aromatic hydrocarbons are readily adsorbed onto particulate matter and the release of these compounds can be controlled, to an extent, by regulating the amount of suspended solids released into the environment.

The draft permit maximum daily monitoring requirement for TSS remains unchanged. The maximum daily TSS values shall be reported on DMRs bi-annually. This is a reduction from the quarterly monitoring frequency of the current permit. The BMPP requirement established in the draft permit will serve to regulate storm water management to a much greater extent than frequent monitoring. Data from previous DMRs show two elevated TSS level measurements since June 15, 1986. However, during the time period from January 4, 2000 to May 31, 2005, seventeen of the twenty TSS levels reported were non-detect.

e. pH

Massachusetts Water Quality Standards for a Class B inland water body require pH to be in the range of 6.5 to 8.3 standard units [See 314 CMR 4.05(3)(b)(3)]. Additionally, there shall be no change from background conditions that would impair any use assigned to this receiving water class.

However, the draft permit maintains the pH range of 6.5 to 8.0 standard units established in the current permit based on anti-backsliding requirements found in 40 CFR §122.44(l). The maximum daily pH values shall be reported on DMRs bi-annually. This is a reduction from the quarterly monitoring frequency of the current permit. The BMPP requirement established in the draft permit will serve to regulate storm water management to a much greater extent than frequent monitoring. Data from previous DMRs shows that since June 15, 1986, the pH limit has been exceeded 7 times. However, the pH limit has not been exceeded since May 5, 1992.

2. Outfall 001B

a. Flow

The flow through Outfall 001B consists of process water from the engine dynamometer. The draft permit requires NEDDA to report the flow rate of the process water, with a limit of 60 gpm for both maximum daily and average monthly flows. This is based on up to date information of the maximum design flow rate of the engine dynamometer. Flow is required to be monitored by estimation of the volume of water discharged from the manhole that discharges to the channel during an engine dynamometer testing event. The average monthly and maximum daily flow values shall be reported on DMRs quarterly.

Additionally, the number of discharge events from the engine dynamometer is to be recorded per day and reported on DMRs as total number of discharge events per quarter.

b. Temperature

The Massachusetts Water Quality Standards for a Class B inland water body, cold water fishery, was mistakenly applied in the current permit. These conditions are that the discharge shall not cause the temperature of the receiving stream (the channel) to exceed 68°F (20°C), nor shall the rise resulting from the artificial origin exceed 4.0°F (2.2°C). The receiving water is actually a warm water fishery. Therefore, the maximum daily effluent limit for temperature at Outfall 001B established in the draft permit is based on Massachusetts Water Quality Standards for a Class B inland water body, warm water fishery. According to 314 CMR 4.05(3)(b)(2), the temperature of the warm water receiving body shall not exceed 83°F (28.3°C). In addition, natural seasonal and daily variations shall be maintained and there shall be no changes from background conditions that would impair any use assigned to this Class.

Therefore, the draft permit requires monitoring of the effluent temperature with a maximum daily limit of 83°F. The maximum daily temperature values shall be reported on DMRs quarterly. Previous sampling at the facility reported a maximum temperature of 77°F (25°C). However, previous DMR data was recorded from samples most likely diluted by storm water.

c. Total Residual Chlorine (TRC)

The draft permit requires quarterly monitoring for maximum daily TRC levels due to the use of city water in the engine dynamometer process water. The National water quality standards established for chlorine are 19 µg/L for criterion maximum concentration and 11 µg/L for criterion continuous concentration monthly average (USEPA, 1986). If DMR data reports that TRC levels found in the engine dynamometer process water is found to exceed the water quality standards, a limit will be established.

d. Oil and Grease (O&G)

The maximum daily effluent limit for oil and grease of 15 mg/L is based on Massachusetts Water Quality Standards for a Class B inland water body. According to 314 CMR 4.05(3)(b)(7), these waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible

portion of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life. A concentration of oil and grease of 15 mg/L is recognized as the level at which many oils produce a visible sheen and/or cause an undesirable taste in fish (USEPA, 1976).

The draft permit maintains a maximum daily O&G limit of 15 mg/L, reported quarterly, based on Massachusetts Water Quality Standards and anti-backsliding requirements found in 40 CFR §122.44(l). Previous sampling at the facility reported an average O&G level of 5 mg/L and one exceedence with an O&G level of 77 mg/L on September 15, 1988. However, previous DMR data was recorded from samples most likely diluted by storm water.

e. pH

Massachusetts Water Quality Standards for a Class B inland water body require pH to be in the range of 6.5 to 8.3 standard units [See 314 CMR 4.05(3)(b)(3)]. Additionally, there shall be no change from background conditions that would impair any use assigned to this receiving water class.

However, the draft permit maintains the pH range of 6.5 to 8.0 standard units established in the current permit based on anti-backsliding requirements found in 40 CFR §122.44(l). The maximum daily pH values shall be reported on DMRs quarterly. Data from previous DMRs shows that since June 15, 1986, the pH limit has been exceeded 7 times. However, the pH limit has not been exceeded since May 5, 1992. Previous DMR data was recorded from samples most likely diluted by storm water.

3. Outfall 001C

Monitoring frequency for the chassis dynamometer is less frequent than that established for the engine dynamometer, as the engine dynamometer is consistently run at a higher horsepower (HP) rating than the chassis dynamometer. Thus, the water discharge from the engine dynamometer is expected to discharge at a higher temperature. Therefore, the engine dynamometer serves as a representative sample of the dynamometer discharges with sampling of the chassis dynamometer required annually to ensure compliance with water quality standards.

a. Flow

The flow through Outfall 001C consists of process water from the chassis dynamometer. The draft permit requires NEDDA to report the flow rate of the process water, with an effluent limit of 60 gpm for both average monthly and maximum daily flows. This is based up to date information on the maximum design flow rate of the chassis dynamometer. Flow is required to be monitored by estimation of the volume of water discharged from the manhole that discharges to the channel during a chassis dynamometer testing event. The average monthly and maximum daily flow values shall be reported on DMRs annually.

Additionally, the number of discharge events from the engine dynamometer is to be recorded per day and reported on DMRs as total number of discharge events per year.

b. Temperature

The Massachusetts Water Quality Standards for a Class B inland water body, cold water fishery, was mistakenly applied in the current permit. These conditions are that the discharge shall not cause the temperature of the receiving stream (the channel) to exceed 68°F (20°C), nor shall the rise resulting from the artificial origin exceed 4.0°F (2.2°C). The receiving water is actually a warm water fishery. Therefore, the maximum daily effluent limit for temperature at Outfall 001C established in the draft permit is based on Massachusetts Water Quality Standards for a Class B inland water body, warm water fishery. According to 314 CMR 4.05(3)(b)(2), the temperature of the warm water receiving body shall not exceed 83°F (28.3°C). In addition, natural seasonal and daily variations shall be maintained and there shall be no changes from background conditions that would impair any use assigned to this Class.

Therefore, the draft permit requires monitoring of the effluent temperature with a maximum daily limit of 83°F. The maximum daily temperature values shall be reported on DMRs quarterly. Previous sampling at the facility reported a maximum temperature of 77°F (25°C). However, previous DMR data was recorded from samples most likely diluted by storm water.

c. Total Residual Chlorine (TRC)

The draft permit requires annual monitoring for maximum daily TRC levels due to the use of city water in the chassis dynamometer process water. The National water quality standards established for chlorine are 19 µg/L for criterion maximum concentration and 11 µg/L for criterion continuous concentration monthly average (USEPA, 1986). If DMR data reports that TRC levels found in the chassis dynamometer process water is found to exceed the water quality standards, a limit will be established.

d. Oil and Grease

The maximum daily effluent limit for oil and grease of 15 mg/L is based on Massachusetts Water Quality Standards for a Class B inland water body. According to 314 CMR 4.05(3)(b)(7), these waters shall be free from oil, grease and petrochemicals that produce a visible film on the surface of the water, impart an oily taste to the water or an oily or other undesirable taste to the edible portion of aquatic life, coat the banks or bottom of the water course, or are deleterious or become toxic to aquatic life. A concentration of oil and grease of 15 mg/L is recognized as the level at which many oils produce a visible sheen and/or cause an undesirable taste in fish (USEPA, 1976).

The draft permit maintains the current permit 15 mg/L O&G limit based on Massachusetts Water Quality Standards. The O&G level shall be reported on DMRs annually. Previous sampling at the facility reported an average O&G level of 5 mg/L and one exceedence with an O&G level of 77 mg/L on September 15, 1988. However, previous DMR data was recorded from samples most likely diluted by storm water.

e. pH

Massachusetts Water Quality Standards for a Class B inland water body require pH to be in the range of 6.5 to 8.3 standard units [See 314 CMR 4.05(3)(b)(3)]. Additionally, there shall be no change from background conditions that would impair any use assigned to this receiving water class.

However, the draft permit maintains the pH range of 6.5 to 8.0 standard units established in the current permit based on anti-backsliding requirements found in 40 CFR §122.44(l). The maximum daily pH values shall be reported on DMRs annually. Data from previous DMRs shows that since June 15, 1986, the pH limit has been exceeded 7 times. However, the pH limit has not been exceeded since May 5, 1992. Previous DMR data was recorded from samples most likely diluted by storm water.

4. Best Management Practices Plan

Pursuant to Section 304(e) of the CWA and 40 CFR §125.103(b), best management practices (BMP) may be expressly incorporated into a permit on a case-by-case basis where necessary to carry out Section 402(a)(1) of the CWA.

To control the activities/operations, which could contribute pollutants to waters of the United States via storm water discharges at this facility, the Current Permit required the facility to develop a Best Management Practices Plan (BMPP) with site-specific BMPs. The BMPP requirements and the BMPs identified therein are intended to facilitate a process whereby the permittee thoroughly evaluates potential pollution sources at the terminal and selects and implements appropriate measures to prevent or control the discharge of pollutants in storm water runoff. The BMPP, upon implementation, becomes a supporting element to any numerical effluent limitations in the Final Permit. Consequently, the BMPP is as equally enforceable as the numerical limits.

The permittee has certified to EPA that a BMPP was developed and implemented for this facility in accordance with the schedule and requirements identified in the Current Permit. The Draft Permit continues to ensure that the BMPP is kept current and adhered to, by requiring the permittee to maintain and update the BMPP as changes occur at the facility. In addition, the Draft Permit requires the permittee to provide annual certification to EPA and the MassDEP, documenting that the previous year's inspections and maintenance activities were conducted, results recorded, records maintained, and that the facility is in compliance with its BMPP. A signed copy of the certification will be sent each year to EPA and MassDEP as well as appended to the BMPP within thirty (30) days of the annual anniversary of the effective date of the Draft Permit. This certification will be signed in accordance with the requirements identified in 40 CFR §122.22. A copy of the most recent BMPP shall be kept at the facility and be available for inspection by EPA and MassDEP.

5. Additional Requirements and Conditions

These effluent monitoring requirements have been established to yield data representative of the discharge under the authority of Section 308(a) of the CWA in accordance with 40 CFR §122.41(j), §122.44(i) and §122.48.

The remaining conditions of the draft permit are based on the NPDES regulations, Part 122 through 125 and consist primarily of management requirements common to all permits

V. ENDANGERED SPECIES ACT

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA) grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants (“listed species”) and habitat of such species that has been designated as critical (a “critical habitat”). The ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to insure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) typically administer Section 7 consultations for bird, terrestrial, and freshwater aquatic species.

EPA has reviewed the federal endangered or threatened species of fish, wildlife, or plants to see if any such listed species might potentially be impacted by the issuance of this NPDES permit. The review has focused primarily on freshwater aquatic species since the discharge is into the channel which flows into the Saugus River. EPA believes that effluent limitations and other permit conditions which are in place in the draft permit should preclude any adverse effects should there be any incidental contact with listed species either in the surface drainage channel or in the Saugus River. During the public comment period, EPA has provided a copy of the draft permit and fact sheet to USFWS.

VI. ESSENTIAL FISH HABITAT

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. § 1801 et seq. (1998)), EPA is required to consult with NMFS if EPA’s action or proposed actions that it funds, permits, or undertakes, “may adversely impact any essential fish habitat” (EFH). The Amendments define EFH as “waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity,” (16 U.S.C. § 1802(10)). “Adverse impact” means any impact which reduces the quality and/or quantity of EFH (50 C.F.R. 600.910 (a)). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species’ fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions. Id.

Essential fish habitat is only designated for species for which federal fisheries management plans exist (16 U.S.C. § 1855(b)(1)(A)). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999.

EPA’s review of available EFH information indicates that this portion of the Saugus River is not designated EFH for any federally managed species (NOAA’s National Marine Fisheries Services). Therefore, consultation with NMFS is not required. The effluent limitations and other permit requirements that are identified in this fact sheet are designated to be protective of all aquatic species. If adverse effects are detected as a result of this permit action, NMFS will be

notified and an EFH consultation will promptly be initiated. During the public comment period, EPA has provided a copy of the draft permit and fact sheet to NMFS.

VII. STATE CERTIFICATION REQUIREMENTS

EPA may not issue a permit unless the MassDEP certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Surface Water Quality Standards or unless state certification is waived. The staff of the MassDEP has reviewed the draft permit and advised EPA that the limitations are adequate to protect water quality. EPA has requested permit certification by the State pursuant to 40 CFR §124.53 and expects that the draft permit will be certified.

VIII. ADMINISTRATIVE RECORD, PUBLIC COMMENT PERIOD, HEARING REQUESTS, AND PROCEDURES FOR FINAL DECISION

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Office of Ecosystem Protection Attn: Nicole Kowalski, 1 Congress Street, Suite 1100 (CIP), Boston, Massachusetts 02114-2023 or via email to kowalski.nicole@epa.gov. The comments should reference the name and permit number of the facility for which they are being provided.

Any person, prior to such date, may submit a request in writing to EPA and the States Agency for a public hearing to consider the draft permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permit, the Regional Administrator will respond to all significant comments and make these responses available to the public at EPA's Boston Office.

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within thirty (30) days following the notice of final permit decision, permits may be appealed to the Environmental Appeals Board in the manner described at 40 CFR § 124.19.

IX. EPA & MassDEP CONTACTS

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays, from the EPA and MassDEP contacts below:

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Paul Hogan, Massachusetts Department of Environmental Protection
Division of Watershed Management, Surface Water Discharge Permit Program
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email: paul.hogan@state.ma.us

Date

Linda M. Murphy, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

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